



FIG. 1

agcttgccgc cgctatttag ggccttttta gatagatgat gcgtttatct acaattagta	60
taaaatttagc tttggtggtg aaattaacca ttatagcgtg aaacaaaaag aaaagtaaat	120
atcactggag gtaaacaaaa agaaaggtaa agaaaggctc ctaatcagat gaaaatttct	180
ctcaaaacttt tagcactctt ttggaacgta aacagtgaag tgaactagag atgttaaaag	240
aggaagataa atgggttaaat atacaaaatg tgtttaacat aaatccattt atccccatt	300
aattcaatcc tttgaattgt taaatatata atatatgttt aatgtcttcc tgttttaacc	360
atggtaaagg agtcttcttg atttggtaat taagtgaag gcacccaaac caaatttata	420
gcgtttaaat tgagtacatt ttgtatatac ggtcgaaagc cgctcaggg ttcaatggct	480
gctaataattt gcccaaaata aaatctcctt taggacttag cttcgtgtac gatagccaat	540
tcgatatctt atgtaggtaa ctatgtttcg taatacatag aattgttcaa ctttttttat	600
gttcgaactt tttttaatt tgcaatgtaa ttatttgtct tatgttacat tttagtcatt	660
tatgtttaaa atgttatatt ttagttattt acgttatcgt gttgtaacat tttaggtact	720
gagccattaa ttgtcgtaa cagtgtaaac gaaagctgac gtggcacgtt aaatcatcgc	780
ttcaaattaa aattttggat taaattatac aattggtccc tatatttttt tcattttttt	840
ctttattttt cattctcttc ggcttctccc tatgttttcc tctcttcttc atttctttta	900
acatagtttt tttatatttt ctaaaattaa atttttcaaa aaaaataaaa tataggagtt	960
agtttttaaaa aatacgttaa aagaaatgga taaggaggga aaacagaggg aaaagcagaa	1020
gaggatgaaa gaaaaagaaa gttaaaagaa cataaaagaa aaaattaaat tgctctaaaa	1080
gaaaaaatat ggggacagat tgtataaatt agccaaaaat ttttgtttaa aatgatgatt	1140
taagtgtat gtcagtttac cattaaagggt aacaattaac gttttaataa ttaaaatatt	1200
ataacccgat aaaataagta actaaaattt taaattttta atataaataa ctaaaatata	1260
acttgagata aataaaagtt gctattaaaa tttaggtata tcaacattaa taatgttggc	1320
cccatataag aagaattcat gtgcaagaag ttaaaatggg tcaacagccg cctacatgcc	1380
aacccttaat ttccaacttt tagttggtga ggataagatg agactaaaat ccgacattgc	1440
atattgaaag gtcaagcata atcagataaa aaatcttggt tcattcattg agtaccaagt	1500
aagtaccct tttttaatca aaactacaac agtgaaggaa actacgaata atctatcatt	1560
caccatgact ttctcccacc atatatttat gtacaccctt ccaatcttcc tacactacca	1620

FIG. 2A

catcgataaa taaaaactgc agcccggggg atccatagtg taaaaaattc ata atg	1676
Met	
1	
gaa gtc tgc aat tgt att gaa ccg caa tgg cca gcg gat gaa ttg tta	1724
Glu Val Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu Leu	
5 10 15	
atg aaa tac caa tac atc tcc gat ttc ttc att gcg att gcg tat ttt	1772
Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Ile Ala Tyr Phe	
20 25 30	
tcg att cct ctt gag ttg att tac ttt gtg aag aaa tca gcc gtg ttt	1820
Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val Phe	
35 40 45	
ccg tat aga tgg gta ctt gtt cag ttt ggt gct ttt atc gtt ctt tat	1868
Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu Tyr	
50 55 60 65	
gga gca act cat ctt att aac tta tgg act ttc act acg cat tcg aga	1916
Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser Arg	
70 75 80	
acc gtg gcg ctt gtg atg act acc gcg aag gtg tta acc gct gtt gtc	1964
Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val Val	
85 90 95	
tcg tgt gct act gcg ttg atg ctt gtt cat att att cct gat ctt ttg	2012
Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu Leu	
100 105 110	
agt gtt aag act cgg gag ctt ttc ttg aaa aat aaa gct gct gag ctc	2060
Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu	
115 120 125	
gat aga gaa atg gga ttg att cga act cag gaa gaa acc gga agg cat	2108
Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His	
130 135 140 145	
gtg aga atg ttg act cat gag att aga agc act tta gat aga cat act	2156
Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr	
150 155 160	
att tta aag act aca ctt gtt gag ctt ggt agg aca tta gct ttg gag	2204
Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu Glu	
165 170 175	
gag tgt gca ttg tgg atg cct act aga act ggg tta gag cta cag ctt	2252
Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln Leu	
180 185 190	

tct tat aca ctt cgt cat caa cat ccc gtg gag tat acg gtt cct att	2300
Ser Tyr Thr Leu Arg His Gln His Pro Val Glu Tyr Thr Val Pro Ile	
195 200 205	
caa tta ccg gtg att aac caa gtg ttt ggt act agt agg gct gta aaa	2348
Gln Leu Pro Val Ile Asn Gln Val Phe Gly Thr Ser Arg Ala Val Lys	
210 215 220 225	
ata tct cct aat tct cct gtg gct agg ttg aga cct gtt tct ggg aaa	2396
Ile Ser Pro Asn Ser Pro Val Ala Arg Leu Arg Pro Val Ser Gly Lys	
230 235 240	
tat atg cta ggg gag gtg gtc gct gtg agg gtt ccg ctt ctc cac ctt	2444
Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His Leu	
245 250 255	
tct aat ttt cag att aat gac tgg cct gag ctt tca aca aag aga tat	2492
Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg Tyr	
260 265 270	
gct ttg atg gtt ttg atg ctt cct tca gat agt gca agg caa tgg cat	2540
Ala Leu Met Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp His	
275 280 285	
gtc cat gag ttg gaa ctc gtt gaa gtc gtc gct gat cag gtg gct gta	2588
Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala Val	
290 295 300 305	
gct ctc tca cat gct gcg atc cta gaa gag tcg atg cga gct agg gac	2636
Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg Asp	
310 315 320	
ctt ctc atg gag cag aat gtt gct ctt gat cta gct aga cga gaa gca	2684
Leu Leu Met Glu Gln Asn Val Ala Leu Asp Leu Ala Arg Arg Glu Ala	
325 330 335	
gaa aca gca atc cgt gcc cgc aat gat ttc cta gcg gtt atg aac cat	2732
Glu Thr Ala Ile Arg Ala Arg Asn Asp Phe Leu Ala Val Met Asn His	
340 345 350	
gaa atg cga aca ccg atg cat gcg att att gca ctc tct tcc tta ctc	2780
Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser Ser Leu Leu	
355 360 365	
caa gaa acg gaa cta acc cct gaa caa aga ctg atg gtg gaa aca ata	2828
Gln Glu Thr Glu Leu Thr Pro Glu Gln Arg Leu Met Val Glu Thr Ile	
370 375 380 385	
ctt aaa agt agt aac ctt ttg gca act ttg atg aat gat gtc tta gat	2876
Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu Asp	
390 395 400	

FIG. 2C

ctt tca agg tta gaa gat gga agt ctt caa ctt gaa ctt ggg aca ttc	2924
Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Leu Gly Thr Phe	
405 410 415	
aat ctt cat aca tta ttt aga gag gtc ctc aat ctg ata aag cct ata	2972
Asn Leu His Thr Leu Phe Arg Glu Val Leu Asn Leu Ile Lys Pro Ile	
420 425 430	
gcg gtt gtt aag aaa tta ccc atc aca cta aat ctt gca cca gat ttg	3020
Ala Val Val Lys Lys Leu Pro Ile Thr Leu Asn Leu Ala Pro Asp Leu	
435 440 445	
cca gaa ttt gtt gtt ggg gat gag aaa cgg cta atg cag ata ata tta	3068
Pro Glu Phe Val Val Gly Asp Glu Lys Arg Leu Met Gln Ile Ile Leu	
450 455 460 465	
aat ata gtt ggt aat gct gtg aaa ttc tcc aaa caa ggt agt atc tcc	3116
Asn Ile Val Gly Asn Ala Val Lys Phe Ser Lys Gln Gly Ser Ile Ser	
470 475 480	
gta acc gct ctt gtc acc aag tca gac aca cga gct gct gac ttt ttt	3164
Val Thr Ala Leu Val Thr Lys Ser Asp Thr Arg Ala Ala Asp Phe Phe	
485 490 495	
gtc gtg cca act ggg agt cat ttc tac ttg aga gtg aag gta aaa gac	3212
Val Val Pro Thr Gly Ser His Phe Tyr Leu Arg Val Lys Val Lys Asp	
500 505 510	
tct gga gca gga ata aat cct caa gac att cca aag att ttc act aaa	3260
Ser Gly Ala Gly Ile Asn Pro Gln Asp Ile Pro Lys Ile Phe Thr Lys	
515 520 525	
ttt gct caa aca caa tct tta gcg acg aga agc tcg ggt ggt agt ggg	3308
Phe Ala Gln Thr Gln Ser Leu Ala Thr Arg Ser Ser Gly Gly Ser Gly	
530 535 540 545	
ctt ggc ctc gcc atc tcc aag agg ttt gtg aat ctg atg gag ggt aac	3356
Leu Gly Leu Ala Ile Ser Lys Arg Phe Val Asn Leu Met Glu Gly Asn	
550 555 560	
att tgg att gag agc gat ggt ctt gga aaa gga tgc acg gct atc ttt	3404
Ile Trp Ile Glu Ser Asp Gly Leu Gly Lys Gly Cys Thr Ala Ile Phe	
565 570 575	
gat gtt aaa ctt ggg atc tca gaa cgt tca aac gaa tct aaa cag tcg	3452
Asp Val Lys Leu Gly Ile Ser Glu Arg Ser Asn Glu Ser Lys Gln Ser	
580 585 590	

FIG. 2D

ggc ata ccg aaa gtt cca gcc att ccc cga cat tca aat ttc act gga	3500
Gly Ile Pro Lys Val Pro Ala Ile Pro Arg His Ser Asn Phe Thr Gly	
595 600 605	
ctt aag gtt ctt gtc atg gat gag aac ggg gta agt aga atg gtg acg	3548
Leu Lys Val Leu Val Met Asp Glu Asn Gly Val Ser Arg Met Val Thr	
610 615 620 625	
aag gga ctt ctt gta cac ctt ggg tgc gaa gtg acc acg gtg agt tca	3596
Lys Gly Leu Leu Val His Leu Gly Cys Glu Val Thr Thr Val Ser Ser	
630 635 640	
aac gag gag tgt ctc cga gtt gtg tcc cat gag cac aaa gtg gtc ttc	3644
Asn Glu Glu Cys Leu Arg Val Val Ser His Glu His Lys Val Val Phe	
645 650 655	
atg gac gtg tgc atg ccc ggg gtc gaa aac tac caa atc gct ctc cgt	3692
Met Asp Val Cys Met Pro Gly Val Glu Asn Tyr Gln Ile Ala Leu Arg	
660 665 670	
att cac gag aaa ttc aca aaa caa cgc cac caa cgg cca cta ctt gtg	3740
Ile His Glu Lys Phe Thr Lys Gln Arg His Gln Arg Pro Leu Leu Val	
675 680 685	
gca ctc agt ggt aac act gac aaa tcc aca aaa gag aaa tgc atg agc	3788
Ala Leu Ser Gly Asn Thr Asp Lys Ser Thr Lys Glu Lys Cys Met Ser	
690 695 700 705	
ttt ggt cta gac ggt gtg ttg ctc aaa ccc gta tca cta gac aac ata	3836
Phe Gly Leu Asp Gly Val Leu Leu Lys Pro Val Ser Leu Asp Asn Ile	
710 715 720	
aga gat gtt ctg tct gat ctt ctc gag ccc cgg gta ctg tac gag ggc	3884
Arg Asp Val Leu Ser Asp Leu Leu Glu Pro Arg Val Leu Tyr Glu Gly	
725 730 735	
atg taa ggatccagct ttcgttcgta tcatcggttt cgacaacggt cgtcaagttc	3940
Met	
aatgcatcag tttcattgcg cacacaccag aatcctactg agttcgagta ttatggcatt	4000
gggaaaactg tttttcttgt accatttggt gtgcttgtaa tttactgtgt tttttattcg	4060
gttttcgcta tcgaactgtg aaatggaaat ggatggagaa gagttaatga atgatatggt	4120
ccttttggtc attctcaaat taatattatt tgttttttct cttatttggt gtgtgttgaa	4180
tttgaaatta taagagatat gcaaacattt tgttttgagt aaaaatgtgt caaatcgtgg	4240

FIG. 2E

cctctaataga ccgaagttaa tatgaggagt aaaacacttg tagttgtacc attatgctta	4300
ttcactaggc aacaaaatata ttttcagacc tagaaaagct gcaaagtta ctgaatacaa	4360
gtatgtcctc ttgtgtttta gacatttatg aactttcctt tatgtaattt tccagaatcc	4420
ttgtcagatt ctaatcattg ctttataatt atagttatac tcatggattt gtagttgagt	4480
atgaaaatat tttttaatgc attttatgac ttgccaatg attgacaaca tgcataatc	4540
gacctgcagc cactcgaagc ggccgccact cgagtggag ctagcttccc gatcctatct	4600
gtcacttcat caaaaggaca gtagaaaagg aaggtggcac taaaaatgcc atcattgcga	4660
taaaggaaaag gctatcggtc aagatgcctc tgccgacagt ggtcccaaag atggaccccc	4720
accacgagg agcatcggtg aaaaagaaga cgttccaacc acgtcttcaa agcaagtgga	4780
ttgatgtgat acttccactg acgtaaggga tgacgcacaa tcccactatc cttcgcaaga	4840
cccttcctct atataaggaa gttcatttca tttggagagg acacgctgaa atcaccagtc	4900
tctctctaca agatcgggga tctctagcta gacgatcggt tcgcatgatt gaacaagatg	4960
gattgcagc aggttctccg gccgcttggg tggagaggct attcggctat gactgggcac	5020
aacagacaat cggtgctct gatgccgccg tggtccggct gtcagcgag gggcgcccgg	5080
ttctttttgt caagaccgac ctgtccggtg ccctgaatga actgcaggac gaggcagcgc	5140
ggctatcgtg gctggccacg acgggcgttc cttgcgcagc tgtgctcgac gttgtcactg	5200
aagcgggaag ggactggctg ctattgggcg aagtgccggg gcaggatctc ctgtcatctc	5260
accttgctcc tgccgagaaa gtatccatca tggtgatgc aatgcggcgg ctgcatacgc	5320
ttgatccggc tacctgcca ttcgaccacc aagcgaaaca tcgcatcgag cgagcacgta	5380
ctcgatgga agccggtctt gtcgatcagg atgatctgga cgaagagcat caggggctcg	5440
cgccagccga actgttcgcc aggtcgaagg cgcgatgcc cgacggcgag gatctcgctg	5500
tgacctatgg cgatgcctgc ttgccgaata tcatggtgga aaatggccgc tttctggat	5560
tcatcgactg tggccggctg ggtgtggcg accgctatca ggacatagcg ttggctaccc	5620
gtgatattgc tgaagagctt ggcggcgaat gggctgaccg cttcctcgtg ctttacggta	5680
tcgccgctcc cgattcgag cgcacgcct tctatgcct tcttgacgag ttcttctgag	5740
cgggactctg ggttcgatc cccaattccc gatcgttcaa acatttgga ataaagtctc	5800

FIG. 2F

ttaagattga atcctgttgc cggctcttgcg atgattatca tataatcttct gttgaattac	5860
gttaagcatg taataattaa catgtaatgc atgacgttat ttatgagatg ggtttttatg	5920
attagagtcc cgcaattata catttaatac gcgatagaaa acaaaatata gcgcgcaaac	5980
taggataaat tatcgcgcg cgtgtcatct atgttactag atcggggatc gggccactcg	6040
agtgggtggc gcacgatcg tgaagtttct catctaagcc cccatttggc cgtgaatgta	6100
gacacgtcga aataaagatt tccgaattag aataatttgt ttattgcttt cgccataaaa	6160
tacgacggat cgtaatttgt cgttttatca aaatgtactt tcattttata ataacgctgc	6220
ggacatctac atttttgaat tgaaaaaaaa ttggaatta ctctttcttt ttctccatat	6280
tgaccatcat actcattgct gatccatgta gatttcccg acatgaagcc atttacaatt	6340
gaatatatcc tgccgcgct gccgcttgc acccggtgga gcttgcattg tggtttctac	6400
gcagaactga gccggttagg cagataattt ccattgagaa ctgagccatg tgcaccttc	6460
ccccaacacg gtgagcgacg gggcaacgga gtgatccaca tgggactttt cctagcttgg	6520
ctgccatttt tggggtgagg ccgttcgcgc ggggcgcag ctggggggat gggaggcccg	6580
cgttaccggg aggggtcgag aagggggggc acccccttc ggcgtgcgcg gtcacgcgcc	6640
agggcgcagc cctgggtaaa aacaagggtt ataaatattg gtttaaaagc aggttaaaag	6700
acagggttagc ggtggccgaa aaacgggcg aaacccttgc aaatgctgga ttttctgct	6760
gtggacagcc cctcaaagt caatagggtgc gccctcatc tgtcatcact ctgccctca	6820
agtgtcaagg atcgcgccc tcactgtca gtagtcgcgc ccctcaagt tcaataccgc	6880
agggcactta tcccagggt tgtccacatc atctgtggga aactcgcgta aaatcaggcg	6940
ttttcgccga tttgcgaggc tggccagctc cacgtcgccg gccgaaatcg agcctgcccc	7000
tcactgtca acgcgcgcc gggtagtcg gccctcaag tgtcaacgct cggccctcat	7060
ctgtcagtga gggccaagt ttccgcgtg tatccacaac gccggcgcc ggcgcggtg	7120
tctgcacac ggcttcgacg gcgtttctg cgcgtttgca gggccataga cggccgccag	7180
cccagcgcg agggcaacca gcccggtgag cgtcgaaaag ggtcgatcga ccgatgccct	7240
tgagagcctt caaccagtc agtccttcc ggtgggcgcg gggcatgact atcgtcgccg	7300
cacttatgac tgtcttcttt atcatgcaac tcgtaggaca ggtgccggca gcgctctggg	7360

FIG. 2G

tcattttcgg cgaggaccgc tttcgtgga ggcgcacgat gatcggcctg tcgcttgccg	7420
tacgccctcg ctcaagcctt cgtcactggt cccgccacca aacgtttcgg cgagaagcag	7480
gccattatcg ccggcatggc ggccgacgcg ctgggctacg tcttgctggc gttcgcgacg	7540
cgaggctgga tggccttccc cattatgatt cttctcgctt ccggcgccat cgggatgccc	7600
gcgttgccag ccatgctgtc caggcaggta gatgacgacc atcagggaca gcttcaagga	7660
tcgctcgccg ctcttaccag cctaacttcg atcactggac cgctgatcgt cacggcgatt	7720
tatgccgcct cggcgagcac atggaacggg ttggcatgga ttgtaggcgc cgccctatac	7780
cttgtctgcc tccccgcgtt gcgtcgccgt gcatggagcc gggccacctc gacctgaatg	7840
gaagccggcg gcacctcgct aacggattca ccaactcaag aattggagcc aatcaattct	7900
tgccggagaac tgtgaatgcg caaaccaacc cttggcagaa catatccatc gcgtccgcca	7960
tctccagcag ccgcacgcgg cgcactctcg gcagcgttgg gtcctggcca cgggtgcgca	8020
tgatcgtgct cctgtcgttg aggaccggc taggctggcg gggttgcctt actggttagc	8080
agaatgaatc accgatacgc gagcgaacgt gaagcgactg ctgctgcaaa acgtctgcga	8140
cctgagcaac aacatgaatg gtcttcgggt tccgtgttcc gtaaagtctg gaaacgcgga	8200
agtcagcgcc ctgcaccatt atgttccgga tctgcatcgc aggatgctgc tggctacct	8260
gtggaacacc tacatctgta ttaacgaagc gctggcattg acctgagtg atttttctct	8320
ggtcccgccg catccatacc gccagttgtt taccctcaca acgttccagt aaccgggcat	8380
gttcatcatc agtaaccgt atcgtgagca tcctctctcg tttcatcggt atcattacc	8440
ccatgaacag aaattcccc ttacacggag gcatcaagtg accaaacagg aaaaaaccgc	8500
ccttaacatg gcccgcttta tcagaagcca gacattaacg cttctggaga aactcaacga	8560
gctggacgcg gatgaacagg cagacatctg tgaatcgctt cacgaccacg ctgatgagct	8620
ttaccgcagc tgctcgcgc gtttcggtga tgacggtgaa aacctctgac acatgcagct	8680
cccggagacg gtcacagctt gtctgtaagc ggatgccggg agcagacaag ccgctcaggg	8740
cgcgtcagcg ggtgttgccg ggtgtcgggg cgcagccatg acccagtcac gtagcgatag	8800
cggagtgtat actggcttaa ctatcgccga tcagagcaga ttgtactgag agtgcaccat	8860
atgcggtgtg aaataccgca cagatgcgta aggagaaaat accgcatcag gcgctcttcc	8920
gcttcctcgc tcaactgactc gctgcgctcg gtcgttcggc tgcggcgagc ggtatcagct	8980

FIG. 2H

cactcaaagg cggtaatagc gttatccaca gaatcagggg ataacgcagg aaagaacatg	9040
tgagcaaaag gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc	9100
cataggetcc gccccctga cgagcatcac aaaaatcgac gctcaagtca gaggtggcga	9160
aacccgacag gactataaag ataccaggcg tttccccctg gaagctccct cgtgcgctct	9220
cctgttccga ccctgccgct taccggatac ctgtccgcct ttctcccttc gggaagcgtg	9280
gcgctttctc atagctcacg ctgtaggtat ctcagttcgg tgtaggtcgt tcgctccaag	9340
ctgggctgtg tgcacgaacc ccccgttcag cccgaccgct gcgccttatac cggtaactat	9400
cgtcttgagt ccaacccggt aagacacgac ttatcgccac tggcagcagc cactggtaac	9460
aggattagca gagcgaggta tgtaggcggg gctacagagt tcttgaagtg gtggcctaac	9520
tacggctaca ctagaaggac agtatttggt atctgcgctc tgctgaagcc agttaccttc	9580
ggaaaaagag ttggtagctc ttgatccggc aaacaaacca ccgctggtag cggtggtttt	9640
tttgtttgca agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc	9700
ttttctacgg ggtctgacgc tcagtggaac gaaaactcac gttaagggat tttggtcattg	9760
agattatcaa aaaggatctt cacctagatc cttttaaat aaatatgaag ttttaaatca	9820
atctaaagta tatatgagta aacttggctc gacagttacc aatgcttaat cagtgaggca	9880
cctatctcag cgatctgtct atttcgttca tccatagttg cctgactccc cgtcgtgtag	9940
ataactacga tacgggaggg cttaccatct ggccccagt ctgcaatgat accgcgagac	10000
ccacgctcac cggctccaga tttatcagca ataaaccagc cagccggaag ggccgagcgc	10060
agaagtggtc ctgcaacttt atccgcctcc atccagtcta ttaattggtg ccgggaagct	10120
agagtaagta gttcgccagt taatagtttg cgcaacgttg ttgccattgc tgcaggtcgg	10180
gagcacagga tgacgcctaa caattcattc aagccgacac cgcttcgcgg cgcggcttaa	10240
ttcaggagtt aaacatcatg agggaagcgg tgatcgccga agtatcgact caactatcag	10300
aggtagttgg cgtcatcgag cgccatctcg aaccgacgtt gctggccgta catttgtagc	10360
gctccgcagt ggatggcggc ctgaagccac acagtgatat tgatttgctg gttacgggtga	10420
ccgtaaggct tgatgaaaca acgcggcgag ctttgatcaa cgaccttttg gaaacttcgg	10480
cttccccctg agagagcgag attctccgcg ctgtagaagt caccattggt gtgcacgacg	10540
acatcattcc gtggcggttat ccagctaagc gcgaactgca atttgagaa tggcagcgca	10600

FIG. 2I

atgacattct tgcaggatc ttcgagccag ccacgatcga cattgatctg gctatcttgc	10660
tgacaaaagc aagagaacat agcgttgcc ttgtaggtcc agcggcggag gaactctttg	10720
atccggttcc tgaacaggat ctatttgagg cgctaaatga aaccttaacg ctatggaact	10780
cgcgcgccga ctgggctggc gatgagcgaa atgtagtgct tacgttgctc cgcatttggt	10840
acagcgcagt aaccggcaaa atcgcgccga aggatgtcgc tgccgactgg gcaatggagc	10900
gcctgcggc ccagtatcag cccgtcatac ttgaagctag gcaggcttat cttggacaag	10960
aagatcgctt ggcctcgcgc gcagatcagt tggaagaatt tgttcactac gtgaaaggcg	11020
agatcaccaa ggtagtcggc aaataatgtc taacaattcg ttcaagccga cgcgcgttcg	11080
cggcgcggct taactcaagc gttagatgct gcaggcatcg tgggtgcacg ctcgtcgttt	11140
ggtatggctt cattcagctc cggttcccaa cgatcaaggc gagttacatg atcccccatg	11200
ttgtgcaaaa aagcggttag ctcttcggc cctccgatcg aggatttttc ggcgctgcgc	11260
tacgtccgck accgcgttga gggatcaagc cacagcagcc cactcgacct ctagccgacc	11320
cagacgagcc aagggatctt tttggaatgc tgctccgtcg tcaggctttc cgacgtttgg	11380
gtggttgaac agaagtcatt atcgtaaggc atgccaagca ctcccaggag gaaccctgtg	11440
gttggcatgc acatacaaat ggacgaacgg ataaaccttt tcacgccctt ttaaataatcc	11500
gttattctaa taaacgctct tttctcttag gtttaccgc caatatatcc tgtcaaacac	11560
tgatagttta aactgaaggc gggaaacgac aatctgatcc ccatca	11606

FIG. 2J

[illegible]

FIG. 3C

GGCATGGATTGTAGGCGCGCCCTATACCTTGTCTGCCTCCCGCGTTGCGTTCGGGTGCATGGAGCCGGCCACCTCGACCTGAATGGAAGCCGGCGCACCTCGCTAACGGA
TTCAACCACTCCAAAGAAATTGGAGCCAATCAATCTTTCGGAGAACTGTGAATGCGCAAAACCAACCTTGGCAGAACATATCCATCGCGTCCGCCATCTCCAGCAGCCGCACGCGG
CGCATCTCGGGCAGCGTTGGGTCTTGCCACAGGTGCGCATGATCGTGTCTCTGTCTGTTGAGGACCCGGCTAGGCTGGCGGGTTCCTTACTGGTTAGCAGAAATGAATCACCG
ATACGAGCGCAACGTTGAAGCGACTGCTGTCTCAAAACGCTGCGACCTGAGCAACAACATGAATGGTCTTCGGTTCGGTAAAGTCTGGAACCGCGGAAGTCAAGCG
CCCTGGACCATATGTTCCGGATCTGCATCGCAGGATGCTGTGGCTACCTGTGGAAACACCTACATCTGTATTAACGAAGCGCTGGCATGACCTGAGTGATTTTCTCTGG
TCCCGCGCATCCATACCGCCAGTTGTTTACCCCTCACAACGTTCCAGTAACCGGGCATGTTTCATCATCAGTAACCGGTATCGTGAGCATCCTCTCTCGTTTCATCGGTATCAT
ACCCCATGAACAGAAATCCCCCTTACACGGAGGCATCAAGTGACCAACAGGAAAAACCGCCCTTAACATGGCCCGCTTATCAGAAGCCAGACATTAACGCTTCTGGAGA

PvuII

AACTCAACGAGCTGGACGGGATGAACAGGCAGACATCTGTGAATCGCTTCACGACCACGCTGATGAGCTTTACCGCAGCTGCCTCGCGCGTTTCGGTGATGACGGTGAAAAACC
TCTGACACATGAGTCCCGGAGACGGTACAGCTTGTCTGTGAAGCGGATGCCGGGAGCAGACAAGCCCGTTCAGGCGCGCTCAGCGGGTGTTCGGGGGTGTTCGGGGCGCAGCCCA
TGACCCAGTACAGTAGGATAGCGGAGTGTACTGGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATCGGGTGTGAATACCGCACAGATGCGTAAAG
GAGAAAAACCGCATCAGGCGCTCTTCGGCTCACTGACTCGTTCGGTTCGGTTCGGGAGCGGTATCAGCTCACTCAAAGCGGGTAATACGGTTATTC
CACAGAAATCAGGGGATAACGAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGCCGTAAGAACCGGTTGCTGGCGTTTTCATAGGCTCCGCCCTCCGACCTGA
CGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACAGGCGTTTCCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCTG
GCCGCTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGATGATCTCAGTTCGGTGTAGGTGCTCGCTCCAAAGCTGGGCTG
TGTCACGAAACCCCGTTCAGCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAATCCAAACCCGGTAAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAAACAG
GATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCTTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTAC
CTTCGGAAAAAAGAGTTGGTAGCTCTTGTATCCGGCAAAACACCCGCTGGTAGCGGTGGTCTTCTTGTGTTGCAAGCAGCAGATTCGCGCAGAAAAAAGGATCTCAAGAAAGA
TCCTTTGATCTTTCTACCGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGATTTTGGTCAATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAATA
ATGAAGTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCTGTTTCATCCATAGT
TGCCTGACTCCCGCTCGTGTAGATAACTACGATACGGGAGGCTTACCATCTGGCCCCAGTGTGCAATGATACCGGAGACCCACGCTCACCGGCTCCAGATTATCAGCAAT
AAAAACGACGCGGAAAGGCGCAGAGTGGTCTTCAACTTTATCCGCTCCATCCAGTCTATTAAATGTTGTCGGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAG

PstI

TTTGGCAACGTTGTGTCATGTCGAGGTCgggagcacaggatgacgcctaacaattcattcaagccgacacccgcttcgcgcgcggttaattcaggaggttaaacatcatg
agggagcggtgatcgccgaagtatcgactcaactacagaggtagtggcgtaatcgagcgccatctcgaaacgacgttgctggccgtacatttgtacggctccgcagtgagat
ggcgccctgaagccacacagtgatattgatttgctggttacggtagccgtgaaggttgatgaacaacacgcgcgagctttgatcaacgaccttttgaaaccttcgggttccct
ggagagagcgagattctccgcgctgtagaagtcaccattggtgtgacgacgacatcattccgtggcggttatccagctaaagcggaactgcaatttgagagaatggcagcgcaat

PvuI

gacattcttcagggtatcttcgagccagccacgatcgacattgatctggctatcttgctgacaaaaaacaagagaacatagcgttgcttggtgaggtccagcgcgaggaactc
tttgatccggttcctgaacaggtatctatttgaggcgctaaatgaacaccttaacgctatgaaactcgccgcccactggcggtggcgatgagcgaatgtagtgtacgttgctcc
cgcatgttgacagcgagtaacggcaaatcgccggaaggtgtcgctgCCgactgggcaatggagcgctgcccagctatcagcccgctacacttgagagctaggcag
gcttatcttgacaagaagatcgcttgccctcgcgcgagatcagttggaagaatttgttcaactacgtgaaagcgagatcaccaaggtagtcggcaaatatgtctaacat

PstI

FIG. 3D

cggttcaagcgcgaccttcgcgcgcgcgttaactcaagcgtagaTGCTGCAGGCATCGTGGTGTCACGCTCGTGGTTGGTATGGCTTCATCAGCTCCGGTTCCCAACG

PvuII

ATCAAGCGGAGTTACATGATCCCCCATGTGTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCTCgatacgAGGAATTTTCGGCGCTGGCTACGTCGCKACCGGTTGAGGGATC
AAGCCACAGACGCCACTCGACCTCTAGCCGACCCAGACGAGCCAAAGGATCTTTTTGGAAATGCTGCTCCGTCGACAGGCTTTCGACGTTTGGTGTTGAAACAGAAAGTCATT
ATCGTACGGAATGCCAAGCACTCCCGAGGGGAACCCCTGTGGTTGGCATGCACATACAAATGGACGACGGATAAACCTTTTCACGCCCTTTTAAATATCCGTTATTCTTAATAAA

HindIII

CGCTCTTTTCTCTTAGGTTTACCCGCCAATATATCCTGTCAAAACACTGATAGTTTAAACTGAAGCGGGGAAACGACAATCTgatccccATCA

FIG. 3E